UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/600,947	06/20/2003	Eric Selvin	42P6933D	9474

8791 7590 06/01/2004

BLAKELY SOKOLOFF TAYLOR & ZAFMAN
12400 WILSHIRE BOULEVARD, SEVENTH FLOOR
LOS ANGELES, CA 90025

EXAMINER	
PERKINS, PAMELA E	

ART UNIT	PAPER NUMBER
2822	

DATE MAILED: 06/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/600,947	SELVIN ET AL.	
	Examin r	Art Unit	
	Pamela E Perkins	2822	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 March 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

This office action is in response to the filing of the amendment on 8 March 2004. Claims 1-10 are pending.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Joarder et al. (5,475,255).

Joarder et al. disclose a method of manufacturing an integrated circuit where a signal line (102,103) is patterned from a metal material as a terminal conductive layer of an integrated circuit die (100); patterning a first protective structure (104,107) to surround the signal line (102,103); and patterning a second protective structure (105,106) to surround the first protective structure (105,106) (col. 2, lines 13-53).

Claims 1-7 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Tamura (6,078,068).

Tamura discloses a method of manufacturing an integrated circuit where a signal line (102) is patterned from a metal material as a terminal conductive layer of an integrated circuit die (100); patterning a first protective structure (120) as a continuous

structure to surround and enclose the signal line (102); and patterning a second protective structure (122) as a continuous structure to surround and enclose the first protective structure (120) (col. 1, line 39 thru col. 2, line 9). Tamura further discloses patterning the first and second protective structures to one of a low rail supply line and a high rail supply line (col. 5, lines 33-64; col. 6, line 55 thru col. 7, line 17). Tamura also discloses forming a first interconnection metallization layer (220a) on a substrate (302); forming a second interconnection metallization layer (220b) on the first interconnection metallization layer (220a); forming at least one signal line (316) coupled to the first interconnection metallization layer (220a) in the second interconnection metallization layer (220b); forming a first protective structure (318a) using a continuous loop-like shape to enclose and surround the at least one signal line (316) in the second interconnection metallization layer (220b); and forming a second protective structure (318b) using a continuous loop-like shape protective structure to enclose and surround the first protective structure (318a) (col. 6, lines 5-33). Tamura discloses wherein the forming the protective structure comprises forming a plurality of protective structures (PSi) for i =1 ...N, a the first protective structure PS 1 surrounding the signal line, each protective structure PSi surrounding a previous protective structure PSi-1 (col. 6, lines 5-33).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tamura in view of Inaba (4,841,354).

Tamura discloses the subject matter claimed above except the first interconnection metallization layer having a first volume and the second interconnection metallization layer having a second volume greater than the first volume.

Inaba discloses a method of manufacturing an integrated circuit where a plurality of interconnection metallization layers (4a, 4b, 4c) are formed on a substrate (3); forming a protective structure (4) on a terminal metal layer, which has a continuous loop-like shape (figure 13). Inaba further discloses the second interconnection metallization layer (4b) having a second volume greater than the first volume of the first interconnection metallization layer (4a) (col. 4, lines 32-48; col. 5, lines 11-32).

Since Tamura and Inaba are both from the same field of endeavor, a method of manufacturing an integrated circuit, the purpose disclosed by Inaba would have been recognized in the pertinent art of Tamura. Therefore, it would have been obvious to one ordinary skill in the art at the time the invention was made to modify Tamura by a first volume and the second interconnection metallization layer having a second volume greater than the first volume as taught by Inaba to prevent external stress (col. 5, lines 11-32).

Referring to claim 8, Tamura does not disclose spacing at least one protective structure approximately 2 microns form the signal line. It would have been obvious to

one having ordinary skill in the art at the time invention was made to space at least one protective structure approximately 2 microns form the signal line disclosed in the claimed invention, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233 (CCPA 1955).

Response to Arguments

Applicant's arguments with respect to claims 1-10 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pamela E Perkins whose telephone number is (571) 272-1840. The examiner can normally be reached on Monday thru Friday, 9:00am to 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amir Zarabian can be reached on (571) 272-1852. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PEP

Michael Trinh Act SPE
Primary Examiner